

Claims

1. Device for driving animals in an oblong corridor section (21) by means of a driving gate (2), which can be moved from one end of the corridor section to the other, characterized in that it comprises a first transport arrangement (3, 5, 10, 12) to move the driving gate (2) in the corridor section in the longitudinal direction of the section from a first position (2b) at one end of the section to a second position (2c) at the other end, and to move the gate (2) in the opposite direction after it has been brought outside the corridor section, from a position (2d), which is opposite the second position (2c) in the corridor section to a position (2a) which is opposite the first position (2b) in the corridor section, which first arrangement comprises a displaceable mounting part (6), which can be moved in the longitudinal direction of the section over a distance corresponding to the distance between the first position (2b) and the second position (2c) of the gate, and that it comprises a second transport arrangement (13, 14, 18, 19) to pull the gate sideways out from the corridor section in the plane of the gate from the second position (2c) in the corridor section, and to push the gate sideways into the corridor section in the plane of the gate from the position (2a), which is opposite the first position (2b) in the corridor section, which second arrangement comprises a second displaceable mounting part (16), to which the gate (2) is fastened and which can be moved transversely to the longitudinal direction of the section over a distance corresponding to at least the width of the driving gate (2).
2. Device according to claim 1, characterized in that the second transport arrangement is suspended in the mounting part (6) of the first transport arrangement.
3. Device according to claim 1, characterized in that the first transport arrangement has at least two guiding surfaces (3), which are parallel to each other and extend in the longitudinal direction of the section, along which guiding surfaces the first mounting part (6) can be displaced.
4. Device according to claim 1, characterized in that the first arrangement comprises a motor (8) to move the displaceable part (6) in the longitudinal direction of the section.

5. Device according to claim 4, characterized in that the first transport arrangement comprises an oblong element (12), which extends in the longitudinal direction of the section and that the motor operate a coupling device (10), the coupling surfaces of which engage with surfaces on the oblong element (12).

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6. Device according to claim 1, characterized in that the second transport arrangement comprises a motor to move the displaceable part (16) with the gate (2) transversely to the longitudinal direction of the section.

10 7. Device according to claim 6, characterized in that the second transport arrangement comprises an oblong element (19), which extends transversely to the longitudinal direction of the section and has surfaces to engage with coupling surfaces of a coupling device (18) on the second mounting part (16) and that the driving shaft of the motor can rotate the oblong element (19).

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8. Device according to claim 1, characterized in that the second arrangement has at least two guiding surfaces (14), which are parallel to each other and extends transversely to the longitudinal direction of the section, along which guiding surfaces the second mounting part (16) with gate can be displaced.

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9. Device according to claim 1, characterized in that it comprises a control unit which is designed to co-ordinate the movement of the first and second transport arrangements.

10. Device according to claim 9, characterized in that control unit is designed to co-
25 ordinate the operation of motors in the first and second transport arrangement.

11. Device according to claim 1, characterized in that the driving gate (2) is mainly plane.

30 12. Device according to claim 1, characterized in that it comprises a side wall (22) on each long side of the corridor section (21).

13. Device according to claim 12, characterized in that one side wall (22) has a first gap (26) through which the driving gate (2) can be pulled sideways out from the corridor section and a second gap (25) through which the gate (2) can be pushed sideways into the corridor section and that the second displaceable mounting part (16) can be moved over a 5 distance corresponding to the width of the gate (2) and the thickness of the wall, together.

14. Device according to claim 1, characterized in that it also comprises a gate (24) which is placed at the second position (2c) of the driving gate (2) on the down-stream side of the position (2c) in relation to the driving direction.

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15. Device according to claim 1, characterized in that it also comprises a gate (23) at the first position (2b) of the driving gate (2) on the up-stream side of the position (2b), which gate can be opened partially to a position which allows animals to walk one at a time through the passage formed by the opening process, and that the gate (23) can also be 15 opened completely to form an opening of the same width as the corridor section, which opening allows several animals to be driven forwards next to each other.

16. Device according to claim 1, characterized in that it comprises two gates (23, 24), which are placed at the first and second positions (2b, 2c) of the driving gate (2), on either 20 side of the section which is operated by the gate (2) when it is moved from the first to the second position.

17. Device according to claim 9 and 15, 16 or 17, characterized in that the control unit is designed to control the opening of gate(s) (23, 24) on downstream and/or upstream side of 25 the position 2c and 2b, respectively.

18. Method for driving animals in an oblong corridor section (12) by means of a driving gate (2) which can be moved from one end of the corridor section to the other, characterized in

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- that a blockage, if present in the upstream end of the corridor section, is removed,
- that animals are driven into the corridor section (21) through the upstream end,

- that the driving gate (2) is pushed into the corridor section when a desired number of animals have passed into the section, from a position (2a) of the gate outside the section to a first position (2b) inside the section in its upstream end
- that a blockage, if present in the downstream end of the corridor section, is removed,
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- that the driving gate (2) is moved to a second position (2c) in the corridor section in the downstream end, driving the animals out from the corridor section,
- that any blockage in the downstream end of the corridor section is re-established in front of the driving gate (2),
- 10 - that the driving gate (2) is moved sideways to a position (2d) outside the corridor section,
- that the driving gate (2) is returned outside the corridor section to the position (2a) opposite the first position (2b) in the corridor section, and
- that the process steps are repeated as required.

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19. Method according to claim 18, characterized in that the corridor system comprises an entrance gate (23) and an exit gate (26) that allow blockage of the corridor section in the upstream end and downstream end, respectively and

- a) that the entrance gate (23) in the upstream end of the corridor section (21) is opened
20 and that animals are driven past the gate and into the corridor section (21),
- a) that the entrance gate (23) is closed when a desired number of animals have passed,
- b) that the driving gate (2) is pushed into the corridor section from a position (2a) outside the section to a first position (2b) inside the section, which is in front of the entrance gate (23)
- 25 c) that the exit gate (24) in the downstream end of the corridor section (21) is opened, and that the driving gate (2) is moved to a second position (2c) in the corridor section behind the exit gate (24), driving the animals out from the corridor section,
- d) that the exit gate (24) is closed in front of the driving gate (2),
- e) that the driving gate (2) is moved sideways to a position (2d) outside the corridor
30 section,
- f) that the driving gate (2) is returned outside the corridor section to the position (2a) opposite the first position (2b) in the corridor section, and
- g) that the process steps a) to f) are repeated as required.